

**Draft Summary of the Environmental Work Group Meeting  
Oroville Facilities Relicensing (FERC Project No. 2100)  
June 23, 2004**

The Department of Water Resources (DWR) hosted a meeting for the Environmental Work Group (EWG) on June 23, 2004 in Oroville.

A summary of the discussion, decisions made, and action items is provided below. This summary is not intended to be a transcript, analysis of the meeting, or to indicate agreement or disagreement with any of the items summarized, except where expressly stated. The intent is to present a summary for interested parties who could not attend the meeting. The following are attachments to this summary:

Attachment 1	Meeting Agenda
Attachment 2	Meeting Attendees
Attachment 3	Narrative Reports: EWG 78B, 79, 59, 87, 36, and 37
Attachment 4	SP-F2 Evaluation of Project Effects on Fish Disease
Attachment 5	Presentation on SP-F2
Attachment 6	Draft Final Report SP-T7 Project Effects on Noxious Terrestrial and Aquatic Plant Species
Attachment 7	Presentation on SP-T7
Attachment 8	Draft Final Report SP-T9: Recreation and Wildlife
Attachment 9	Presentation on SP-T9
Attachment 10	Draft Final Report SP-W9 Project Effects on Natural Protective Processes
Attachment 11	Final Report SP-F15 Task 2; SP-F3.1 Task 1C Inventory of Potentially Available Habitat, and Distribution of Juvenile and Adult Fish Upstream from Lake Oroville
Attachment 12	Final Report SP-F15 Task 3 Evaluation of Methods and Devices Used in the Capture, Sorting, Holding, Transport, and Release of Fish
Attachment 13	Presentation on SP-F15, Tasks 2 and 3
Attachment 14	SP-G2, Task 1.1 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam, Resources and References

## **I. Introduction**

Attendees were welcomed to the EWG meeting. Attendees introduced themselves and their affiliations. The desired outcomes of the meeting were discussed as listed on the meeting agenda. The meeting agenda and list of meeting attendees are appended to this summary as Attachments 1 and 2, respectively. The EWG observed a moment of silence in memory of Michael Pierce.

## **II. Action Items – May 19, 2004 EWG Meeting**

Ted Alvarez noted that a summary of the May 19, 2004 EWG meeting has not yet been posted on the relicensing web site but will be soon. The Facilitator reviewed the status of action items from the May EWG meeting as follows:

**Action Item #E133:** Arrange meeting to review results of Scenario 23 with the EWG.  
**Status:** Terry Mills (DWR) reported that the meeting is pending scheduling by Curtis Creel once Scenario 23 is complete.

## **Carry Over**

**Action Item #E132:** Consider re-formatting tracking tool to eliminate some columns and include summary information such as description, findings, and recommendations.

**Status:** Terry Mills confirmed that this suggestion has been considered and dismissed as unnecessary.

### **III. Modeling Update**

Curtis Creel was unable to attend the meeting so no modeling update was provided.

### **IV. Resource Action Discussion**

#### ***Task Force Summaries and Next Meetings***

Dave Olson (SWRI) described discussions at the June 8<sup>th</sup> EWG Fish Passage Task Force meeting. The Task Force discussed SP-F15, Task 2 and 3 reports and discussed updates to Task 4. The Task Force flagged a number of issues requiring further discussion and/or information to resolve including marina release feasibility, potential genetic introgression of steelhead with resident trout, potential to meet fish passage goals with downstream habitat enhancement and creation, and a phasing approach to evaluate remaining unknowns for a passage program. A presentation of F15, Task 2 and 3 reports was scheduled for later in the meeting (see discussion below). Terry Mills noted that if necessary, the EWG Fish Passage Task Force would meet again on July 8<sup>th</sup> at SWRI in Sacramento from 9:30am to 3:00 pm.

Brad Cavallo (DWR) reported that the Hatchery Task Force met on June 15<sup>th</sup> and discussed the current tagging program designed to improve our understanding of the timing of spring-run spawning, spawning success rates and their special distribution. The next Hatchery Task Force meeting is scheduled for July 20<sup>th</sup> with the location to be determined.

Brad also discussed the results of the June 3<sup>rd</sup> meeting of the expert panel reviewing the PHABSIM results. The panel suggested that the juvenile salmonid results should be included as an addendum to the report. Eric Theiss (NOAA Fisheries) suggested he needed more time to evaluate the implications of using 'cover' information in the model.

#### ***Resource Action Narrative Reports***

The EWG reviewed six narrative reports: EWG 78B, 79, 59, 87, 36, and 37 (Attachment 3).

Dave Bogener (DWR) described EWG 78B as a habitat protection measure to develop operational and/or management protocols to minimize potential impacts to nesting bank swallows related to Project releases. Dave described the ongoing consultations with CDFG under the State Endangered Species Act and DWR's development of a Biological Assessment (BA) under the Joint State/Federal Operations Criteria and Plan (OCAP) environmental review process. The narrative report recommends that DWR continue to consult with CDFG under the OCAP BA process and provide updates to the relicensing stakeholders. The EWG agreed to reclassify EWG 78B as a Category 1.

Dave Bogener described EWG 79 as a measure designed to improve wildlife habitat within the Oroville Wildlife Area (OWA) for wetland and riparian dependent wildlife species through reclamation of barren dredger tailings. The EWG discussed the potential for the dredger tailing piles to be designated historical features and the need to plan for dealing with possible contaminants contained within the gravel-cobble material. The action describes commercial gravel harvest as a viable tool to deal with the quantity of material that would be removed for site reclamation/restoration. The EWG agreed to reclassify EWG 79 as a Category 1.

Resource action EWG 59 describes a modification to recreation use patterns at the Thermalito Forebay and Thermalito Afterbay to minimize adverse effects to sensitive wildlife species. Dave Bogener described the two actions identified as potentially adversely affecting wildlife in the

area as 1) off-road vehicle (ORV) use in vernal pool habitats, and 2) recreational disturbance of upland habitats during the waterfowl nesting season. Dave reported that approximately 22% of the vernal pool habitat is currently affected by unauthorized recreational vehicles. This action is designed to limit currently illegal ORV use and would conflict with any recreation recommendations that include increased access in areas containing vernal pools. USFWS has identified the conservation measures discussed in EWG 59 to limit ORV damage to vernal pools and Federal ESA compliance requires implementation of these measures. The EWG agreed to reclassify EWG 59 as a Category 1.

Phil Unger (MWH) described EWG 87, designed to modify and or operate the Oroville Facilities to provide additional warm water for agriculture and recreational activities and additional cold water to satisfy salmonid habitat requirements. He noted that the Engineering and Operations Work Group (EOWG) is also working on this issue and has a task force that is examining various operational and structural options that might address both the agriculture and salmonid habitat water temperature interests. Five different temperature management strategies were identified and the various options for each strategy are included in Table 1 of the narrative report. EWG 87 remains a Category 2 with the recommendation that the EOWG Task Force continue to evaluate the costs and potential benefits of several options to increase temperatures to the diversions while providing appropriate temperatures downstream to benefit salmonid habitat.

Phil Unger described EWG 36, a proposal to change operations of the Oroville Facilities to reduce water temperatures in the low-flow channel (LFC) of the Feather River during certain times of the year for the benefit of Chinook salmon and steelhead. The change includes both increased flow and the release of colder water from the reservoir and would likely be implemented from April through October. EWG 37 includes structural changes and/or changes in operations to reduce water temperatures in the high flow channel (HFC) of the Feather River. The EWG discussed the potential statewide water supply implications of any modifications to Oroville releases. Temperature reductions would likely rely on alterations to the proportion of flow reaching the HFC that passes through the LFC versus the Thermalito complex. Substantial increases to flows down the LFC are constrained by habitat considerations.

The EWG agreed to ask Curtis Creel (DWR) to update the EWG at their July EWG meeting on EO1, a resource action currently being evaluated by the EOWG Task Force. The EWG also requested that Ted Alvarez (DWR) provide EWG 87, 36, and 37 narrative reports to Lori Brown (DWR) for distribution to the EOWG Task Force in advance of their next meeting, scheduled for June 25, 2004. All three narrative reports remain Category 2.

### ***Updated Tracking Matrix and Flow Chart***

Wayne Dyok noted that no substantial changes were made to the Tracking Matrix and Flow Chart so revised copies were not provided at this meeting.

## **V. Study Deliverables and Implementation Updates**

### ***Reports***

#### ***SP-F2***

Phil Unger provided copies of SP-F2 Evaluation of Project Effects on Fish Disease (Attachment 4) and provided a presentation (Attachment 5). The objective of the study was to evaluate the effects of ongoing and future Project operations on the establishment, transmission, extent and control of significant fish diseases in the Feather River basin. The study reports that the most significant diseases in the Project waters are IHN and ceratomyxosis, both of which only affect salmonids. Rainbow trout and steelhead are most normally highly susceptible to ceratomyxosis, while Chinook and coho salmon are more resistant to the disease. Chinook salmon, rainbow

trout, sockeye salmon and kokanee can be significantly affected by IHN. In addition to IHN and ceratomyxosis, the list of significant fish diseases needing management action includes bacterial kidney disease, whirling disease, cold water disease, enteric red mouth, and columnaris. The EWG discussed the role of the hatchery in controlling disease outbreaks through their management and stocking practices. Eric Theiss suggested that a UV system for the hatchery capable of treating 40cfs would cost approximately \$500,000. Anna Kastner (CDFG) noted the limited space available at the hatchery to modify or add significant equipment. Since the author of SP-F2 was not able to attend the EWG meeting, the EWG was asked to provide any comments or questions in writing to Terry Mills so that he can forward them to the author.

#### *SP-T7*

Gail Kuenster (DWR) provided copies of the Draft Final Report SP-T7 Project Effects on Noxious Terrestrial and Aquatic Plant Species (Attachment 6) and provided a presentation on SP-T7 (Attachment 7). Gail explained that approximately 9900 acres were surveyed for noxious and invasive weed species during the 2002 and 2003 field studies. Thirty-nine of 64 target weed species were identified and mapped within the Project area covering approximately 518 acres. Thirty-three of the species were found below Oroville Dam in the OWA and in and around the Thermalito Complex. Twenty-four of the species were found around Lake Oroville. Wetland margins and riparian areas tend to be the most heavily infested areas, with target species including purple loosestrife, giant reed, tree of heaven, star thistle, scarlet wisteria, and medusahead found near the Afterbay, Forebay, and Diversion Pool. In addition to the species noted above, the OWA includes other prolific noxious weed species such as parrots feather, and Himalayan blackberry. Gail noted that the invasion of water primrose into a number of ponds in the OWA has caused adverse ecological impacts to a number of fish species however, it has increased habitat for the federally and State listed giant garter snake. Noxious weeds around Lake Oroville are primarily in disturbed areas near roads, trails, and Project facilities. Gail noted that removal of noxious and invasive weed species within the Project area would enhance native plant communities and wildlife habitats and help control their spread into downstream waters although eradication and/or control is unlikely due to the widespread nature of the plants. She suggested that a management plan that prioritizes certain species for treatment, combined with restoration and replanting with native species could lessen their impact to native species and habitats.

#### *SP-T9*

Dave Bogener provided copies of the Draft Final Report SP-T9: Recreation and Wildlife (Attachment 8) and provided a presentation on SP-T9 (Attachment 9). He explained the objectives of the study to identify on-going and future recreation-related direct and indirect impacts to wildlife and plant communities and to identify opportunities to reduce or eliminate these impacts. Dave described the high diversity of wildlife habitats contained within the Project area, including habitat capable of supporting up to 12 species protected under State and federal ESA law. In addition, habitat is present to support 26 State and federally listed Species of Concern. The study results indicate that both direct and indirect impacts to wildlife and wildlife habitats occur as a result of the high level of recreational use and development within portions of the Project area. Dave noted that demand for additional recreational opportunities resulting in increased recreational use and development is likely to increase in the future. The report provides general guidance for project location, design and construction to minimize impacts to wildlife populations and their habitat. The report also includes conservation measures designed in consultation with CDFG and USFWS to minimize or avoid direct, indirect, interdependent, and interrelated recreational-related impacts to species protected under State or federal ESA.

### *SP-W9*

The draft final report for SP-W9 (Attachment 10) was handed out at the meeting but the discussion was deferred to the July EWG meeting.

### *SP-F15 Task 2; SP-F3.1 Task 1C and SP-F15 Task 3*

Dave Olson provided copies of the combined SP-F15 Task 2 and SP-F3.1 Task 1C Final Report - Inventory of Potentially Available Habitat, and Distribution of Juvenile and Adult Fish Upstream from Lake Oroville (Attachment 11) and Final Report SP-F15 Task 3 Evaluation of Methods and Devices Used in the Capture, Sorting, Holding, Transport, and Release of Fish (Attachment 12). He briefly reviewed the material and indicated that the full presentations on Tasks 2 and 3 were given at the June 8, 2004 Fish Passage task force meeting and noted that those detailed presentations are available on the CD that was distributed at that meeting. The presentations are also attached to this summary as attachment 13. Eric Theiss suggested the title of the report implies a larger study area and should be more specific to identify the study as including information only to the first upstream barrier. Sharon Stohrer (SWRCB) pointed out that the PG&E reference information is incomplete. Dave Olson reviewed the results for each task within F15 and noted that at this point, the goals of a passage program need to be defined before the appropriate approach can be identified. Mike Taylor (USFS) suggested the results of the study point toward an adaptive management approach to methodically address the uncertainties that remain unresolved.

The EWG discussed a correction needed to fix a 'glitch' in the model, resulting in a 0.56 return ratio rather than the 0.3 ratio reported. The EWG also discussed which variables within the model are the most sensitive and what amount of change would need to be accomplished to reach a 1:1 ratio, representing a viable option. Terry Mills noted that DWR and NOAA Fisheries representatives are meeting to discuss the issue of fish passage and other potential actions for salmonid habitat enhancements within both the context of relicensing and the OCAP consultation process. He suggested that the F15 study report is complete and any comments should be directed to him within 30 days. Eric Theiss asked if comments would be accepted late because he still needed to comment on reports for SP-F5/7 and SP-F21 which were distributed at previous meetings but has not had the time to do it yet. Terry agreed to accept comments that come in late from Eric. The group discussed the need for the next Fish Passage Task Force meeting, tentatively scheduled for July 8, 2004, and decided to cancel the meeting.

### *SP-G1 Task 1.1*

Koll Buer distributed SP-G2, Task 1.1 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam, Resources and References (Attachment 14) and explained that the report contains a review and summary of existing resource data and references used to map and evaluate Project effects on geomorphic processes including sediment sources and transport, channel stability, hydrograph, and erosion.

### **Methodology Change**

#### *SP-F10, Task 1A and 1B*

Dave Olson explained that the consulting team is requesting a modification to the SP-F10 study plan to delete tasks 1A and 1B. He described the tasks and the fact that the necessary data needed to complete the tasks do not exist and it is also not possible to collect the data in a timeframe required for this process. Eric Theiss questioned the suggestion to delete the tasks and requested the decision be deferred to the July EWG meeting. He requested that an explanation of exactly what would change from the original scope and what information was not available be distributed to the EWG. The EWG agreed to defer the decision and DWR will prepare the explanation requested.

## **VII. Next Steps**

The participants agreed that the next EWG meeting would be:

Date: July 28, 2004

Time: 9:00 a.m. – 4:00 p.m.

Location: Oroville Field Division

### **Action Items**

The following action items identified by the EWG include a description of the action, the participant responsible for the action, and due date.

**Action Item #E134:** Receive update from Curtis Creel on EO1.

**Responsible:** DWR

**Due Date:** July 28, 2004

**Action Item #E135:** Provide narrative reports EWG 87, 36, and 37 to Lori Brown for distribution to the EOWG Task Force in advance of their next meeting.

**Responsible:** DWR – Ted Alvarez

**Due Date:** June 25, 2004

**Action Item #E136:** Develop explanation of changes to original scope of SP-F10 if tasks 1A and 1B are deleted and describe unavailable information related to these tasks.

**Responsible:** DWR

**Due Date:** July 28, 2004

### **Carry Over**

**Action Item #E133:** Arrange meeting to review results of Scenario 23 with the EWG.

**Responsible:** DWR

**Due Date:** July 28, 2004